UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,669	01/03/2002	Mark T. Feuerstraeter	42390P11856	8280

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EXAMINER
NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	10/037,669	FEUERSTRAETER ET AL.
	Examiner	**Art Unit**
	Steven HD Nguyen	2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 January 2002</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>6/03</u>.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Claim Objections

1.   Claim 29 objected to because of the following informalities: the claim can not dependent

on itself. The examiner assumes it depends on claim 28. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

3.   Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated by Williams (USP

6957269).

Williams discloses a network interface with enhanced Ethernet flow control capability to

selectively throttle a mere subset of Ethernet traffic (Fig 7, Ref 570).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams

(USP 6957269) in view of Lee (USP 6859435).

Williams discloses a method and network interface comprising identifying a receive

capability associated with one or more priority levels of Ethernet traffic for a network device

(Col. 4, lines 43-55 includes queues for storing the frames, each queue corresponds to a priority

of the frame, See Col. 5, lines 29-46, identifying which priority queues has capability to receive

packets and which priority queue do not have capability to receive packet; then generate a

control message "pause frame", includes a priority indicator which indicates all the other

priorities buffer is still have capability to receive packets, for transmitting to the sender interface

which suspends the transmission of packets having the same priority indicator, See col. 7, lines

49-58, col. 8, lines 13-36, See col. 9, lines 3-47 and col. 11, lines 1-22); transmitting the

generated control message to a communicatively coupled network device, whereupon receipt of

the generated control message the communicatively coupled network device acts in accordance

with the received control message to suspend a subset of Ethernet traffic (Fig 5, ref 570); the

buffer for each priority level is comprised of one or more memory device(s) (Col. 5, lines 29-46);

generating a control message comprises generating an Ethernet control packet including a

priority field, the priority field denoting the flow control priority level (Fig 4); the priority field is

included in a header portion of the Ethernet control packet; receiving Ethernet traffic;

identifying a priority level associated with each packet of received Ethernet traffic; and

forwarding each received packet to a receive buffer based, at least in part, on the identified

priority level associated with the Ethernet packet (Col. 5, lines 29-46); monitoring the receive

capability of buffers associated with each of the priority levels of Ethernet traffic; and issuing

control messages, as necessary, to throttle transmission of at least a subset of Ethernet traffic in

accordance with the identified receive capability associated with the one or more priority levels

(Col. 7, lines 49-58); throttling transmission of a subset of Ethernet traffic comprises temporarily

suspending transmission of the subset of Ethernet traffic for a set period of time (Col. 7, lines 25-

58); receiving content from a host network device for transmission to another network device

communicatively coupled through an Ethernet network; and assigning a priority level to the

received content based, at least in part, on a source of such Content (inherently discloses by

station for generating a frame with priority); receiving content from one or more source

applications executing on a host network device, the content tagged with a priority level

associated with its source application; and selectively transmitting received content to another

network device communicatively coupled through an Ethernet network based, at least in part, on

the priority level of the content (inherently discloses) and received control message(s) throttling

transmission of a subset of such Ethernet traffic (Fig 5, ref 570); a transmit buffer, responsive to

a host network device and the control logic, to receive content from one or more application(s)

executing on the host network device for transmission to other network device(s) through an

Ethernet network, the received content including an indication of priority level (Inherently

discloses); the indication of priority level in the received content is determined by its source

application (Inherently discloses); the control logic is a media access controller (MAC) including

enhanced flow control capability to implement flow control on a mere subset of Ethernet traffic

(See col. 1, lines 23-40). However, Williams fails to discloses generating a control message

including a flow control priority level, the flow control priority level denoting the identified

priority level above or below which the network device has the ability to receive Ethernet traffic.

In the same field of endeavor, Lee discloses a method and device for generating a control message including a flow control priority level, the flow control priority level denoting the identified priority level above or below which the network device has the ability to receive Ethernet traffic (Col 5, lines 62 to col. 6, lines 25, identifying the priority levels that the node still has a capability to receive more packets and generating a feedback message includes an priority level that the node has room to receive the packets has a priority greater or less than the priority level in the feedback message; See col. 10, lines 44-62, col. 11, lines 44-67, col. 12, lines 43-64 and Figs 9-10); determining available buffer capacity for each of a plurality of buffers associated with a commensurate plurality of Ethernet priority levels (Fig 10, Ref 1007 for determining available buffers); the available buffer capacity associated with a particular Ethernet priority level denotes the ability of the buffer to receive additional Ethernet traffic of that priority level (Fig 10, Ref 1007 for determining available buffers for receiving the packets); the buffers associated with each of the priority levels are virtual buffers implemented within a common physical buffer (col. 11, lines 8-20); the generated control message, being Ethernet pause frame having a priority field which uses to implement flow control after identifying the priority level, includes an indication of the priority level above which a receive buffer has available capacity to receive Ethernet traffic of an associated priority level (Col. 5, lines 62 to col. 6, Lines 25); a receiving network device initiates a pause in transmission of Ethernet traffic having a priority level below that indicated in the received control message (Col. 5, lines 62 to col. 6, Lines 25); another control message is received denoting that transmission of the subset of Ethernet traffic may resume (Col. 6, lines 9-25).

Since, Lee suggests a method and system for generating a feedback message includes a

priority level for indicating the receiver still has room for the packet with a priority greater or

low the priority level for transmitting to the sender can be implement in the Ethernet network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention

was made to apply the teaching of Lee into the teaching of Williams. The motivation would

have been to prevent of deadlocks and live-locks in lossless back-pressured packet network.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's .

disclosure.

Erimli (USP 6450258) discloses a method and system for controlling the flow of data

frames through a network switch on a port by port basic.

Galand (USP 5838922) discloses a method and system for generating a feedback for a

shared buffer with a threshold for each class.

Iliadis (USP 5742606) discloses a method and system for generating a feedback for a

shared buffer with a threshold for each class.

Kadambi (US 2003/0016628) discloses a method for selectively controlling the flow of

data via a network device.

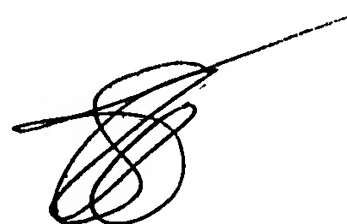McAlpine (US 20020141427) discloses a method and system for performing a flow

control.

Fawaz (USP 6970424) discloses a method for selectively controlling the flow of data via

a network device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven HD Nguyen
Primary Examiner
Art Unit 2665
December 8, 2005